

WHAT IS CLAIMED IS:

1. A method of treating a retroviral infection by an HIV retrovirus in an afflicted host which comprises administering to the host a therapeutically effective amount of a compound represented by the following formula:



or a pharmaceutically acceptable acid-addition or base-addition salt thereof;

wherein:

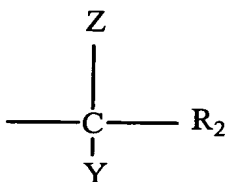
component A is a substituted or unsubstituted aryl functional group, substituted or unsubstituted piperidyl, substituted or unsubstituted thiopheneyl;

component L is sulfonyl, sulfinyl or thio; and,

component B is a substituted or unsubstituted aromatic nitrogen containing heteroaryl functional group.

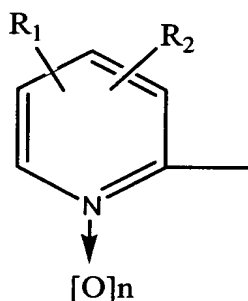
2. The method of claim 1 wherein the retroviral infection being treated is an infection by an HIV retrovirus selected from the group consisting of HIV-1 and HIV-2.

3. The method of claim 1 wherein the substituted or unsubstituted aryl functional group component A is a functional group of the following formula:



wherein Z is H, Cl, cyano, alkyl having from 1 to 15 carbon atoms, alkoxyalkyl having 2 or 3 carbon atoms; Y is H or a double bond to a carbon which is attached to R; and R is phenyl, biphenyl, benzyl, polycycloaryl, heteroaryl or phenyl substituted with 1 to 5 substituents which may be the same or different, the substituents being selected from the group consisting of lower alkyl having from 1 to 5 carbon atoms, halogen, nitro, methoxy, ethoxy, benzyloxy, methylenedioxy, 2,2-dichlorocyclopropyl, trifluoromethyl, methylsulfonyl, cyano and phenoxy.

4. The method of claim 1 wherein the substituted or unsubstituted aromatic nitrogen containing heteroaryl functional group component B is 4-methylquinolyl, 8-ethyl-4-methylquinolyl or a functional group of the following formula:



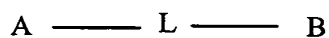
wherein n is 0 or 1,  $R_1$  and  $R_2$  may be the same or different and are H, halogen, lower alkyl having from 1 to 4 carbon atoms, hydroxy, or nitro.

5. The method of claim 1 wherein the compound is selected from the group consisting of 2-(phenylmethylsulfonyl) pyridine-N-oxide, 2-[1-(2,5-dimethylphenyl)octylsulfonyl] pyridine-N-oxide, 2-[(2,5-dimethylphenyl)methylsulfonyl] pyridine-N-oxide, 2-[[1-(2,5-dimethylphenyl)ethyl]sulfonyl]-3-methylpyridine-N-oxide, 2-[[1-(2,5-dimethylphenyl)chloromethyl]sulfonyl]-4-methylpyridine-N-oxide, 2-[1-(2,5-

dimethylphenyl)chloromethyl)sulfonyl pyridine, 2-[1-(2,5-dimethylphenyl)methylthio]-3-chloropyridine-N-oxide, 2-[phenylmethyl]thio-3-hydroxypyridine, 2-[(2,5-dimethylphenyl)methylthio] pyridine, 2-[(2,3,4,5,6-pentachlorophenyl)methylsulfonyl] pyridine N-oxide, 2[1-(phenylethyl)sulfonyl]-8-ethyl-4-methylquinoline, 2-[(3,4-dichlorophenyl)methylsulfonyl] pyridine-N-oxide, 2-[(4-(2,2-dichlorocyclopropyl)phenyl)methylsulfonyl] pyridine-N-oxide, 2-[(2,4,6-trimethylphenyl)methylsulfonyl] pyridine-N-oxide, 2-[(3-nitro-4-chlorophenyl)methylsulfonyl] pyridine-N-oxide, 2-[phenylmethylsulfonyl] pyridine-N-oxide, 2-[[1-(2,5-dimethylphenyl)propyl]sulfonyl]-3-methylpyridine-N-oxide, 2-[(9-anthryl)methylsulfonyl] pyridine-N-oxide, 2-[4-((1,1dimethyl)propyl)phenyl)methylsulfonyl] pyridine-N-oxide, 2-[1-(2,5-dimethylphenyl)ethylthio]-4-methylquinoline, 2-[[1-(2,5dimethylphenyl)methyl]sulfonyl]-3-methylpyridine-N-oxide and pharmaceutically acceptable acid-addition and base-addition salts thereof.

6. The method of claim 1 wherein the compound is contained in a composition containing a pharmaceutically acceptable carrier.

7. A method of inhibiting the replication of an HIV retrovirus, the method comprising contacting the HIV retrovirus with an effective amount a compound represented by the following formula:

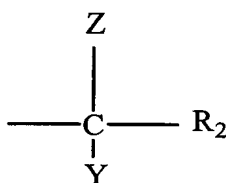


or a pharmaceutically acceptable acid-addition or base-addition salt thereof; wherein:

component A is a substituted or unsubstituted aryl functional group, substituted or unsubstituted piperidyl, substituted or unsubstituted thiophenyl;  
 component L is sulfonyl, sulfinyl or thio; and,  
 component B is a substituted or unsubstituted aromatic nitrogen containing heteroaryl functional group.

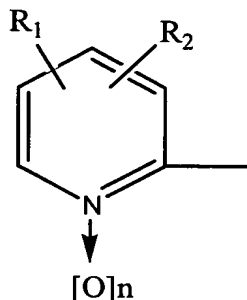
8. The method of claim 7 wherein the HIV retrovirus whose replication is being inhibited is a retrovirus selected from the group consisting of HIV-1 and HIV-2.

9. The method of claim 7 wherein the substituted or unsubstituted aryl functional group component A is a functional group of the following formula:



wherein Z is H, Cl, cyano, alkyl having from 1 to 15 carbon atoms, alkoxyalkyl having 2 or 3 carbon atoms; Y is H or a double bond to a carbon which is attached to R; and R is phenyl, biphenyl, benzyl, polycycloaryl, heteroaryl or phenyl substituted with 1 to 5 substituents which may be the same or different, the substituents being selected from the group consisting of lower alkyl having from 1 to 5 carbon atoms, halogen, nitro, methoxy, ethoxy, benzyloxy, methylenedioxy, 2,2-dichlorocyclopropyl, trifluoromethyl, methylsulfonyl, cyano and phenoxy.

10. The method of claim 7 wherein the substituted or unsubstituted aromatic nitrogen containing heteroaryl functional group component B is 4-methylquinolyl, 8-ethyl-4-methylquinolyl or a functional group of the following formula:



wherein n is 0 or 1, R<sub>1</sub> and R<sub>2</sub> may be the same or different and are H, halogen, lower alkyl having from 1 to 4 carbon atoms, hydroxy, or nitro.

11. The method of claim 7 wherein the compound is selected from the group consisting of 2-(phenylmethylsulfonyl) pyridine-N-oxide, 2-[1-(2,5-dimethylphenyl)octylsulfonyl] pyridine-N-oxide, 2-[(2,5-dimethylphenyl)methylsulfonyl] pyridine-N-oxide, 2-[[1-(2,5-dimethylphenyl)ethyl]sulfonyl]-3-methylpyridine-N-oxide, 2-[[1-(2,5-dimethylphenyl)chloromethyl]sulfonyl]-4-methylpyridine-N-oxide, 2-[1-(2,5-dimethylphenyl)chloromethyl]sulfonyl pyridine, 2-[1-(2,5-dimethylphenyl)methylthio]-3-chloropyridine-N-oxide, 2-[phenylmethyl]thio-3-hydroxypyridine, 2-[(2,5-dimethylphenyl)methylthio] pyridine, 2-[(2,3,4,5,6-pentachlorophenyl)methylsulfonyl] pyridine N-oxide, 2[1-(phenylethyl)sulfonyl]-8-ethyl-4-methylquinoline, 2-[(3,4-dichlorophenyl)methylsulfonyl] pyridine-N-oxide, 2-[(4-(2,2-dichlorocyclopropyl)phenyl)methylsulfonyl] pyridine-N-oxide, 2-[(2,4,6-trimethylphenyl)methylsulfonyl] pyridine-N-oxide, 2-[(3-nitro-4-chlorophenyl)methylsulfonyl] pyridine-N-oxide, 2-[phenylmethylsulfinyl] pyridine-N-oxide,

14 2-[[1-(2,5-dimethylphenyl)propyl]sulfonyl]-3-methylpyridine-N-oxide, 2-[(9-  
15 anthryl)methylsulfonyl] pyridine-N-oxide, 2-[4-((1,1 dimethyl)propyl) phenyl)methylsulfonyl]  
16 pyridine-N-oxide, 2-[1-(2,5-dimethylphenyl)ethylthio]-4-methylquinoline, 2-  
17 [[(2,5dimethylphenyl)methyl]sulfonyl]-3-methylpyridine-N-oxide and pharmaceutically  
18 acceptable acid-addition and base-addition salts thereof.

1 12. The method of claim 7 wherein the compound is contained in a composition  
2 containing a pharmaceutically acceptable carrier.

1 13. A method of treating an HIV infection in an afflicted host which comprises  
2 administering to the host a therapeutically effective amount of a compound selected from the  
3 group consisting of 2-[[1-(2,5-dimethylphenyl)ethyl]sulfonyl]-3-methylpyridine-N-oxide, 2-  
4 [[1-(2,5-dimethylphenyl)chloromethyl]sulfonyl]-4-methylpyridine-N-oxide, 2-[1-(2,5-  
5 dimethylphenyl)chloromethyl]sulfonyl] pyridine, 2-[1-(2,5-dimethylphenyl)methylthio]-3-  
6 chloropyridine-N-oxide, 2-[phenylmethyl]thio-3-hydroxypyridine, 2-[(2,3,4,5,6-  
7 pentachlorophenyl) methylsulfonyl] pyridine N-oxide, 2[1-(phenylethyl)sulfonyl]-8-ethyl-4-  
8 methylquinoline, 2-[(3,4-dichlorophenyl)methylsulfonyl] pyridine-N-oxide, 2-[(4-(2,2-  
9 dichlorocyclopropyl)phenyl)methylsulfonyl] pyridine-N-oxide, 2-[(2,4,6-trimethylphenyl)  
10 methylsulfinyl] pyridine-N-oxide, 2-[(3-nitro-4-chlorophenyl)methylsulfonyl] pyridine-N-  
11 oxide, 2-[phenylmethylsulfinyl] pyridine-N-oxide, 2-[[2,5dimethylphenyl)methyl]sulfonyl]-  
12 3-methylpyridine-N-oxide and pharmaceutically acceptable acid-addition and base-addition  
13 salts thereof.